REMARKS

Claims 1-20 are currently pending in the case. Claims 1-8, 12-15 and 17-20 have been withdrawn from consideration in the Paper filed on December 1, 2003. Claims 9-11 and 16 are under consideration, and stand rejected under 35 U.S.C. § 102(b) based on arguments laid out in the non-final Office Action mailed on February 23, 2004. Applicant thanks the Examiner for the careful examination of this application and respectfully requests reexamination and reconsideration of the case, as amended. Below, Applicant addresses each of the rejections levied in the Office Action and explains why the rejections are not applicable to the pending claims as amended.

Amendments to the Claims

Claim 9 has been amended to include a limitation regarding the antibody used in the method of treatment. As amended, claim 9 specifies that the antibody is a *monoclonal* antibody. Support for this amendment can be found, for example, on page 10, line 2, of the application as originally filed. Applicant respectfully submits that no new matter is added through the proposed amendment of claim 9.

Claim Rejections – 35 U.S.C. § 102(b)

Claims 9-11 and 16 stand rejected under 35 U.S.C. § 102(b), on the ground that they are anticipated by U.S. Pat. No. 6,013,257 (hereafter the '257 patent) to Pan *et al.* as evidenced by Hoover *et al.* (J. Biol. Chem. 2000, 275(30): 23187-23193).

As stated by the Examiner, the '257 patent teaches and claims the treatment of an autoimmune disease, specifically multiple sclerosis, in a patient with antibodies to human neurotactin (which is also known in the art as "fractalkine", as evidenced by Hoover), the sequence of which is disclosed as SEQ ID NO:4 in the '257 patent. The Examiner has taken the position that the prior art teaching clearly anticipates the claimed invention.

Applicant respectfully disagrees and points out that the Examiner seems to have overlooked the limitation (present in claim 9 as originally filed) that the antibody used in the

method of treatment "*binds to CX3CR1 or fractalkine and inhibits chemotaxis of killer lymphocytes by suppressing an interaction between CX3CR1 and fractalkine*". As stated on page 13, lines 16-18, of the present specification, an antibody that binds to CX3CR1 or fractalkine "does not necessarily inhibit the interaction between CX3CR1 and fractalkine". In experiments described in Example 1 of the present application, the inventors observed that monoclonal antibodies 2A9-1 and 1F2-2 are examples of such antibodies that are directed to CX3CR1 but do not inhibit interaction between CX3CR1 and fractalkine (see also page 13, lines 18-21, of the specification).

The present claims recite methods of treatment using *monoclonal* antibodies that (1) bind to CX3CR1 or fractalkine, *and* (2) inhibit chemotaxis of killer lymphocytes by suppressing the interaction between CX3CR1 and fractalkine (see, for example, page 14, lines 1-12, of the application). According to the present invention, use of such antibodies allows "infiltration of killer lymphocytes responsible for cytotoxic activity in an autoimmune disease or the like to be effectively suppressed" (see page 13, lines 22-28 of the specification; and Example 6, page 35, lines 21-24). In Example 7, for instance, monoclonal antibodies that inhibit the interaction between CX3CR1 and fractalkine are selected from anti-fractalkine antibodies.

It is axiomatic that a prior art reference must teach every element of a claim in order to anticipate that claim. The '257 patent does not describe methods of treatment using monoclonal antibodies and further does not teach or suggest any methods of treatment using antibodies that inhibit interaction between CX3CR1 and fractalkine. In fact, the antibody used in the Examples of the '257 patent is a polyclonal antibody against a peptide located at the amino terminus of fractalkine (see column 32, lines 32-36). It is worth noting that such a polyclonal antibody has been reported to cross-react with human CD84 (see A.D. Lucas *et al.*, Am. J. Pathol. 2001, 58: 855-866, a copy of which is attached to this paper).

The '257 patent therefore does not teach or suggest a method of treatment of an autoimmune disease such as multiple sclerosis using an anti-fractalkine monoclonal antibody which inhibits chemotaxis of killer lymphocytes by suppressing the interaction between CX3CR1 and fractalkine as is recited in the present claims. Applicant asserts that the '257

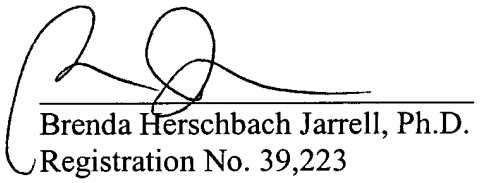
patent fails to teach every element of claims 9-11 and 16, therefore the methods of claims 9-11 and 16 are not anticipated by the '257 patent, and, furthermore, could not be rendered obvious by the '257 patent.

CONCLUSION

Applicant again thanks the Examiner for his careful review of the case. The claims have been amended to obviate all rejections. Based on the Remarks presented above, Applicant respectfully submits that Claims 9-11 and 16 are now in condition for allowance.

Please charge any fees that may be associated with this matter, or credit any overpayments, to our Deposit Account No.: 03-1721.

Respectfully submitted,



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Dated: June 23, 2004